

Attorney Docket No. 030175

Patent

IN THE CLAIMS

1. (Currently Amended) A method of position determination for a mobile station, the method comprising:
  - determining a first measurement for position determination for the mobile station from position determination signals received at the mobile station; and
  - ~~estimating a probability that the first measurement is a false alarm from the position determination signals to determine~~ing a first reliability indicator ~~from the signals for the first measurement, the first reliability indicator representing a level of measurement false alarm probability for the first measurement.~~
2. (Currently Amended) The method of claim 1, further comprising:
  - determining a reliability level from the first reliability indicator to represent a probability that a position for the mobile station calculated using the first measurement is not false.
3. (Original) The method of claim 2, wherein the position is calculated at the mobile station.
4. (Original) The method of claim 1, further comprising:
  - transmitting the first measurement and the first reliability indicator to a remote server for position determination of the mobile station.
5. (Currently Amended) The method of claim 1, further comprising:
  - transmitting one or more signal quality indicators from the mobile station to a remote server, the one or more signal quality indicators being determined from the position determination signals for the first measurement;
  - wherein the first reliability indicator is determined at the remote server using the one or more signal quality indicators.

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6. (Currently Amended) The method of claim 1, further comprising:  
determining a second measurement for position determination for the mobile station from position determination signals received at the mobile station; and  
estimating a probability that the second measurement is a false alarm from the position determination signals to determining a second reliability indicator ~~from position determination signals~~ for the second measurement; ~~the second reliability indicator representing a level of measurement false alarm probability for the second measurement.~~
7. (Original) The method of claim 6, further comprising:  
calculating a position solution for the mobile station using the first and second measurements; and  
combining the first and second reliability indicators to determine a reliability of the position solution.
8. (Original) The method of claim 6, further comprising:  
eliminating one of the first and second measurements from position determination using the first and second reliability indicators.
9. (Original) The method of claim 1, wherein the first reliability indicator is determined from at least one of:  
a) magnitude of a correlation peak;  
b) correlation peak width;  
c) signal strength;  
d) signal to noise ratio;  
e) signal to interference ratio;  
f) relationship of a correlation peak used for determination of the first measurement with one or more candidate peaks; and  
g) relationship of signals for determination of the first measurement with detected signals.

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10. (Original) The method of claim 1, wherein the first measurement comprises one of:

- a) a time of arrival of a signal; and
- b) a pseudorange.

11-20. Withdrawn, without prejudice.

21. (Currently Amended) A machine readable medium containing executable computer program instructions which when executed by a data processing system cause the system to perform a method of position determination for a mobile station, the method comprising:

determining a first measurement for position determination for the mobile station from position determination signals received at the mobile station; and

estimating a probability that the first measurement is a false alarm from the position determination signals to determining a first reliability indicator from the signals  
~~for the first measurement, the first reliability indicator representing a level of measurement false alarm probability for the first measurement.~~

22. (Currently Amended) The medium of claim 21, wherein the method further comprises:

determining a reliability level from the first reliability indicator to represent a probability that a position for the mobile station calculated using the first measurement is not false.

23. (Original) The medium of claim 22, wherein the position is calculated at the mobile station.

24. (Original) The medium of claim 21, wherein the method further comprises:  
transmitting the first measurement and the first reliability indicator to a remote server for position determination of the mobile station.

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25. (Currently Amended) The medium of claim 21, wherein the method further comprises:

transmitting one or more signal quality indicators from the mobile station to a remote server, the one or more signal quality indicators being determined from the position determination signals for the first measurement;

wherein the first reliability indicator is determined at the remote server using the one or more signal quality indicators.

26. (Currently Amended) The medium of claim 21, wherein the method further comprises:

determining a second measurement for position determination for the mobile station from position determination signals received at the mobile station; and  
estimating a probability that the second measurement is a false alarm from the position determination signals to determining a second reliability indicator from position determination signals for the second measurement, the second reliability indicator representing a level of measurement false alarm probability for the second measurement.

27. (Original) The medium of claim 26, wherein the method further comprises:

calculating a position solution for the mobile station using the first and second measurements; and

combining the first and second reliability indicators to determine a reliability of the position solution.

28. (Original) The medium of claim 26, wherein the method further comprises:

eliminating one of the first and second measurements from position determination using the first and second reliability indicators.

29. (Original) The medium of claim 21, wherein the first reliability indicator is determined from at least one of:

- a) magnitude of a correlation peak;
- b) correlation peak width;

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- c) signal strength;
- d) signal to noise ratio;
- e) signal to interference ratio;
- f) relationship of a correlation peak used for determination of the first measurement with one or more candidate peaks; and
- g) relationship of signals for determination of the first measurement with detected signals.

30. (Original) The medium of claim 21, wherein the first measurement comprises one of:

- a) a time of arrival of a signal; and
- b) a pseudorange.

31-40. Withdrawn, without prejudice.

41. (Currently Amended) A data processing system for position determination for a mobile station, the data processing system comprising:

- means for determining a first measurement for position determination for the mobile station from position determination signals received at the mobile station; and
- means for estimating a probability that the first measurement is a false alarm from the position determination signals to determineing a first reliability indicator ~~from the signals for the first measurement, the first reliability indicator representing a level of measurement false alarm probability for the first measurement.~~

42. (Currently Amended) The data processing system of claim 41, further comprising:

- means for determining a reliability level from the first reliability indicator to represent a probability that a position for the mobile station calculated using the first measurement is not false.

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43. (Original) The data processing system of claim 42, wherein the position is calculated at the mobile station.
44. (Original) The data processing system of claim 41, further comprising:  
means for transmitting the first measurement and the first reliability indicator to a remote server for position determination of the mobile station.
45. (Currently Amended) The data processing system of claim 41, further comprising:  
means for transmitting one or more signal quality indicators from the mobile station to a remote server, the one or more signal quality indicators being determined from the position determination signals for the first measurement;  
wherein the first reliability indicator is determined at the remote server using the one or more signal quality indicators.
46. (Currently Amended) The data processing system of claim 41, further comprising:  
means for determining a second measurement for position determination for the mobile station from position determination signals received at the mobile station; and  
means for estimating a probability that the second measurement is a false alarm from the position determination signals to determining a second reliability indicator ~~from position determination signals for the second measurement, the second reliability indicator representing a level of measurement false alarm probability for the second measurement.~~
47. (Original) The data processing system of claim 46, further comprising:  
means for calculating a position solution for the mobile station using the first and second measurements; and  
means for combining the first and second reliability indicators to determine a reliability of the position solution.

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48. (Original) The data processing system of claim 46, further comprising:  
means for eliminating one of the first and second measurements from position determination using the first and second reliability indicators.
49. (Original) The data processing system of claim 41, wherein the first reliability indicator is determined from at least one of:
- a) magnitude of a correlation peak;
  - b) correlation peak width;
  - c) signal strength;
  - d) signal to noise ratio;
  - e) signal to interference ratio;
  - f) relationship of a correlation peak used for determination of the first measurement with one or more candidate peaks; and
  - g) relationship of signals for determination of the first measurement with detected signals.
50. (Original) The data processing system of claim 41, wherein the first measurement comprises one of:
- a) a time of arrival of a signal; and
  - b) a pseudorange.
- 51-60. Withdrawn, without prejudice.
61. (Currently Amended) A mobile station of a position determination system, the mobile station comprising:
- a signal receiving circuit to receive position determination signals;
  - a processor coupled to the signal receiving circuit, the processor determining a first measurement for position determination for the mobile station from the position determination signals received at the mobile station, the processor estimating a probability that the first measurement is a false alarm from the position determination signals to determining a first reliability indicator from the signals for the first

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~~measurement, the first reliability indicator representing a level of measurement false alarm probability for the first measurement.~~

62. (Currently Amended) The mobile station of claim 61, wherein the processor further determines a reliability level from the first reliability indicator to represent a probability that a position for the mobile station calculated using the first measurement is not false.

63. (Original) The mobile station of claim 61, further comprising:  
a communication section coupled to the processor, the communication section transmitting the first measurement and the first reliability indicator to a remote server for position determination of the mobile station.

64. (Currently Amended) The mobile station of claim 61, wherein the processor further determines a second measurement for position determination for the mobile station from position determination signals received at the mobile station, and estimates a probability that the second measurement is a false alarm from the position determination signals to determine a second reliability indicator for the second measurement from position determination signals received by the signal receiving circuit; wherein the second reliability indicator represents a level of measurement false alarm probability for the second measurement.

65. (Original) The mobile station of claim 64, wherein the processor further calculates a position solution for the mobile station using the first and second measurements and combines the first and second reliability indicators to determine a reliability of the position solution.

66. (Original) The mobile station of claim 64, wherein the processor further eliminates one of the first and second measurements from position determination using the first and second reliability indicators.



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67. (Original) The mobile station of claim 61, wherein the first reliability indicator is determined from at least one of:

- a) magnitude of a correlation peak;
- b) correlation peak width;
- c) signal strength;
- d) signal to noise ratio;
- e) signal to interference ratio;
- f) relationship of a correlation peak used for determination of the first measurement with one or more candidate peaks; and
- g) relationship of signals for determination of the first measurement with detected signals.

68. (Original) The mobile station of claim 61, wherein the first measurement comprises one of:

- a) a time of arrival of a signal; and
- b) a pseudorange.

69-78. Withdrawn, without prejudice.